

for GM Linder NJD 002 186 690

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June 15, 2016

Mr. Gary Greulich
New Jersey Department of Environmental Protection
Northern Regional Office
7 Ridgedale Avenue
Cedar Knolls, NJ 07927

RE: Remedial Action Progress Report No. 27 for the Industrial #1 Redevelopment Area Portion of the Former General Motors (GM) Linden Assembly Plant, 1016 West Edgar Road, Linden, Union County, New Jersey 07036; DUK059.701.0205.

Dear Mr. Greulich:

On May 28, 2009, the New Jersey Department of Environmental Protection (NJDEP) approved the New Jersey Remedial Action Work Plan and RCRA Corrective Measures Proposal Addendum No. 2 (RAWP) for the Industrial #1 Redevelopment Area of the Former GM Linden Assembly Plant. The May 28, 2009 approval letter requested Remedial Action Progress Report for the Industrial #1 Redevelopment Area on/by November 30, 2009. Subsequent reports are submitted on a quarterly basis.

As discussed during extensive correspondence with NJDEP, the Industrial #1 Redevelopment Area was sold in late-2013 by Linden Development LLC to Duke Linden LLC (Duke Linden). Duke Realty Corporation is a primary member of both the former owner (Linden Development LLC) and new owner (Duke Linden) and will provide for consistent implementation of the previously-approved remedial strategy outlined in RAWP Addendum No. 2.

As part of the property transaction, NJDEP assigned the following updated identification numbers for the industrial portion of the Former GM Plant which includes the Industrial #1 Redevelopment Area:

- Program Interest Number: 621084
- Case Tracking Number: E20040531-Industrial

This letter constitutes Remedial Action Progress Report No. 27 for the Industrial #1 Redevelopment Area. Hull has prepared this report on behalf of Duke Linden to summarize remedial activities completed on the Site between March 1, 2016 and May 31, 2016.

Requirements, according to N.J.A.C. 7:26E-6.6, are shown below in **bold italics**, with Hull/Duke Linden's update following. The report certification required by N.J.A.C. 7:26E-1.5 is included in Attachment A.

- 1. NJDEP requires a description of each planned remedial action
 - i. scheduled to be initiated or completed within the reporting period
 - ii. actually initiated or completed during the reporting period; and
 - iii. scheduled but not initiated or not completed during the reporting period, including the reasons for the noncompliance with the approved schedule.

Soil

As outlined in the approved RAWP, the remedial activities for soils on the Industrial #1 Redevelopment Area consist of the following:



- a. Establishing deed restrictions or environmental covenants to maintain commercial/industrial land use at the Site;
- b. Regrading the site to achieve the grade necessary to support the proposed redevelopment;
- Constructing building slabs, parking areas and roadways and placing one foot of clean soil over geotextile fabric in future greenspaces to preclude direct contact exposures to future receptor populations and/or provide cover to historical fill material; and
- d. Surveying to demonstrate that all areas are covered with engineering controls (e.g., building slabs, parking areas and roadways) or one foot of clean soil.

These remedial activities are directly related to construction activities associated with the future redevelopment at the Site which are dependent upon finalization of agreements with end users. Duke Linden is currently constructing a building on the last remaining portion of the Industrial #1 Redevelopment Area. The construction activities described in the RAWP have been completed or are currently being implemented in the Industrial #1 redevelopment portion of the site.

During the current reporting period Building 11 construction activities were substantially completed. The construction activities were conducted consistent with the approved RAWP. Building 11 activities conducted during the reporting period include earthwork (site), concrete demolition, asphalt removal, installation of subsurface utilities, laying concrete and asphalt pavement, placing clean cap material in greenspace areas, and vapor barrier installation. Demolished concrete and asphalt were stockpiled on the Retail Redevelopment area of the Site and crushed/milled. This material was utilized as subbase prior to asphalt and concrete placement. During the next reporting period, Duke plans to turn over the building to a tenant who will be making modifications to the interior layout. It is anticipated that the tenant modifications will be completed by September 2016.

Fill Material Import

As discussed in previous reports, Duke has imported structural fill material from off-site sources for use in redevelopment activities. During the reporting period, approximately 7,824 tons of material were imported from the sources below for use in the Industrial #1 and #2 Redevelopment Areas of the site since April 1, 2016. Import quantities for March 2016 were included in the fill material import totals presented in Remedial Action Progress Report No. 19 for the Industrial #2 Redevelopment Area.

- Trap Rock Industries, LLC. Kingston Quarry. 1,225 tons of crushed stone (virgin source), 475 DeMott Lane, Somerset, NJ 08528
- 2. East Side Access, Clean Cap Material Import from Metropolitan Transportation Authority (MTA)/Long Island Railroad (LIRR) project, Long Island, New York (approximately 2,833 cubic yards; 4,250 tons)
- "Elizabeth Topsoil" Certified Clean Topsoil (approximately 1,206 cubic yards; 1,809 tons) from Impact Reuse and Recovery Center, 1000 Page Avenue, Lyndhurst, NJ 07071 which is an NJDEP-licensed Class B recycling center
- Certified Clean Topsoil Source (approximately 360 cubic yards; 540 tons) from Vollers Class B Recycling Facility, 3311 Route 22, North Branch, NJ 08876

The Kingston Quarry material consists of clean, native, virgin crushed stone. As such, characterization sampling is not required pursuant to the RAWP. Approximately 2,833 cubic yards of previously stockpiled clean sand and gravel from the MTA/LIRR East Side Access project was removed from the Retail Redevelopment Area and placed in greenspace areas in the Industrial # 1 and #2 Redevelopment Areas. Data packages for this material were submitted in previous quarterly reports. The East Side Access material was covered with topsoil from the Lyndhurst and Vollers Class B Recycling facilities.

Approximately 1,206 cubic yards of clean cap material (Elizabeth Topsoil) was obtained from the Lyndhurst Class B Recycling facility for placement in greenspace areas. The laboratory results and fill supplier's certification package for the material imported during the current period are provided in Attachment B.

Approximately 360 cubic yards of clean cap material (Certified Clean Topsoil) was obtained from Vollers Class B Recycling Facility for placement in greenspace areas. The laboratory results and fill supplier's certification package for the material imported during the current period are provided in Attachment B.

Groundwater

The RAWP for the Industrial #1 Redevelopment Area was limited to soils. Groundwater actions, if any, are related to resolution of the disputed groundwater issue between the Site and neighboring Merck Pharmaceutical facility. Based on the findings outlined in Duke Linden's latest disputed groundwater investigation report prepared by Hull (i.e., MW-97 Monitoring Well Cluster Installation and Supplemental Groundwater Sampling Report, July 2012), the groundwater impacts associated with the disputed groundwater area are associated with off-site sources. NJDEP issued a technical comment letter dated November 30, 2012 outlining the findings from the agency review of the July 2012 report. NJDEP's letter indicates that no sources have been identified on the Duke Linden property that created the groundwater contamination in the dispute. The NJDEP letter requests that Linden Development (now Duke Linden) perform an additional year of groundwater monitoring in the southern portion of the site. A work plan for the groundwater sampling was submitted in late-March 2013. NJDEP issued initial comments on the groundwater sampling work plan via email on September 26, 2013.

Linden Development / Duke Linden conducted a facility-wide groundwater sampling event in late-November and December 2013 in consultation with NJDEP. The wells included in the facility-wide event included those outlined in the March 2013 groundwater monitoring plan, as well as the additional wells requested by the NJDEP case team via email dated September 26, 2013.

NJDEP provided final approval of the groundwater monitoring plan on April 4, 2014. Linden Development / Duke Linden conducted additional facility-wide groundwater sampling events in late April/early May 2014, late August/early September 2014 and December 2014/January 2015. The groundwater results were provided to NJDEP in the March 2015 Supplemental Quarterly Groundwater Monitoring Report prepared by Hull. Additional groundwater monitoring was recommended to confirm the December 2014 results that showed a significant decrease in volatile organic compounds (VOCs) in a number of wells. Additional sampling locations were added following consultation with the NJDEP.

In April 2015, the additional groundwater sampling was conducted to further monitor groundwater concentration trends, to confirm the December 2014 results that showed a significant decrease in VOCs in a number of wells, collect additional data to further support that impact to the weathered and bedrock groundwater zones are attributable to off-site sources, and to assist in establishing a CEA for the Industrial Redevelopment Areas at the Site. The results of the April 2015 supplemental

sampling event were provided to NJDEP in a letter report dated May 19, 2015 under separate cover. In anticipation of Building 11 construction, the report recommended decommissioning a number of monitoring wells in the planned Building 11 area and wells located within the interior of Building 13. On June 19, 2015, the NJDEP Case Manager approved decommissioning of nine shallow overburden wells, four deep overburden wells, six weathered bedrock wells, and eight bedrock wells. The wells were decommissioned between June 21 and June 25, 2015 by Advanced Drilling, Inc. and documented in previous Progress Report #24.

On August 25, 2015, Duke, Hull and JM Sorge met with the NJDEP Case Manger to discuss establishing Classification Exception Areas (CEA) for the Retail and Industrial portions of the site. The aroundwater impacts associated with the disputed groundwater area are associated with off-site sources. Based on the meeting, a groundwater permit and CEA will be established for the overburden groundwater zones over a portion of the Industrial #1 and #2 Development Areas in the AOI-6 area. Additional groundwater sampling of select wells is necessary to support the monitored natural attenuation remedy. The monitoring wells selected to be monitored were MW-18S, MW-22S, MW-39S, MW-96S, BEC-9D, MW-35D, MW-91D, MW-92D, MW-93D, MW-95D, and MW-96D. These wells were sampled during the November 2015 and February 2016 sampling events. Based on further conversations with the NJDEP Case Manager on February 8 and 18, 2016, three additional shallow overburden wells were installed on June 2, 2016 to replace MW-21S, MW-25S and MW-50S following the substantial completion of Building 11. These replacement wells (MW-21SR, MW-25SR and MW-50SR) are anticipated to be sampled later in June 2016. The groundwater analytical results from the February 2016 sampling event were provided in Progress Report #19 for the Industrial #2 Redevelopment Area. Groundwater analytical results from the May 2016 sampling event are provided in Attachment C. The groundwater results for the three replacement monitoring wells will be provided in the next quarterly progress report.

On March 7, 2016, the NJDEP Case Manager approved decommissioning a number of monitoring wells on the Industrial #1 and #2 Redevelopment Areas of the Site. A total of four shallow overburden wells, three deep overburden wells, 17 weathered bedrock wells, and seven bedrock wells were decommissioned the week of May 2, 2016 by Advanced Drilling, Inc. The monitoring wells that were decommissioned include: BEC-1D, BEC-1SR, BEC-4D, BEC-9S, MW-16B, MW-16S, MW-16W, MW-31D, MW-36W, MW-37W, MW-42W, MW-44W, MW-45B, MW-45W, MW-49B, MW-49B4, MW-49W, MW-50B, MW-50W, MW-66B, MW-66W, MW-70S, MW-70W, MW-93W, MW-94W, MW-95W, MW-96W, MW-97B and MW-97W. Monitoring wells MW-68S, MW-68W and BEC-13S could not be located and were likely destroyed during Building 12 construction.

Storm Sewer (AOI-18)

Remedial activities associated with AOI-18 are complete, as documented in Remedial Action Progress Report No. 1 (November 2009).

2. NJDEP requires discussion of problems and delays in the implementation of the RAWP, which should include proposals for corrections.

During the current reporting period Duke substantially completed construction of Building 11. The Building 11 area occupies the remainder of the Industrial #1 Redevelopment Area and Industrial #2 Redevelopment Area. Following construction of Building 11 and planned modifications from the tenant, the implementation of the Industrial #1 RAWP will be complete.

3. NJDEP requires proposals for a deviation from, or modification to, the approved RAWP.

No deviations from, or modifications to, the approved RAWP are planned or required at this time.

 NJDEP requires submittal of a revised schedule pursuant to N.J.A.C. 7:26E-6.5, to reflect the changes as noted in 1 through 3 above.

A tentative construction schedule for Building 11 was included in Progress Report 23 and an updated construction schedule for Buildings 11 was provided in Progress Report No. 24.

5. NJDEP requires an updated status of all permit applications relative to the critical path schedule.

The permits required for initiation of the remedial activities are summarized below.

Permit/Approval Type	Status	Notes						
Planning Board Approval	Approved 11/17/08	Site plan approved by City of						
		Linden Planning Board						
NPDES Permit (Storm Water)	Approved 9/16/09	NPDES Permit No. 0088323						
Soil Conservation District	Approved 9/16/09	Approved by Somerset-Union						
Son Conservation District	Approved 9/10/09	Conservation District						
Building Permit for Building 12	Approved 12/4/13; Updated							
building Fermit for building 12	7/10/14							
Building Permit for Building 13	Approved 6/12/14							
Building Permit for Building 11	Approved 9/24/15							

6. NJDEP requires a listing of each remedial action to be performed during the next reporting period.

Construction activities related to Building 11 were substantially completed during this reporting period. This includes completing the engineering controls in the approved RAWP (building slabs, concrete and asphalt drives, parking areas and roadways, and placing one foot of clean cap material in greenspaces). During the next reporting period, it is anticipated that tenant modification to Building 11 will be completed. Upon completion of tenant modifications, the Building 11 Soil RAR will be submitted to NJDEP.

- 7. NJDEP requires costs of each remedial action
 - i. Annual summary of all remedial action costs incurred to date; and
 - ii. Revised cost estimate for remedial actions remaining to be performed.

Costs incurred include approximately \$7,000 for AOI-18 storm sewer cleaning, approximately \$15,000 for UST closure activities. The costs associated with earthwork, installation of engineering controls (construction of building slabs, pavement sections, etc. and placement of clean cover materials) are being tabulated and will be provided in the next quarterly report

The overall cost estimate for completing remedial activities remains consistent with that presented in the RAWP (i.e., approximately \$11,900,000 for earthwork and construction of engineering controls).

8. NJDEP requires a tabulation of sampling results (according to N.J.A.C. 7:26E-3.13(c)3) received during the reporting period and a summary of the data and any conclusions, presented in a format consistent with N.J.A.C. 7:26E-4.8.

A groundwater sampling event was conducted between May 25 and 27, 2016. Groundwater-related sampling results are provided in Attachment C.

9. NJDEP requires a summary of active groundwater remedial actions

- i. groundwater elevation maps with groundwater flow shown immediately before and during active groundwater remediation;
- ii. graphs depicting changes in concentrations over time for all impacted wells as well as all downgradient wells;
- iii. summary of volume of water treated since last reporting period and the total volume treated since active remedial action commenced; and
- iv. Summary of groundwater contamination, indicating either that contamination remains above applicable standards (include a proposal detailing additional remedial actions) or that concentrations are below applicable standards.

The RAWP for the Industrial #1 Redevelopment Area was limited to soils only. Therefore, this section is not applicable.

10. NJDEP requires a summary of natural remediation groundwater remedial actions

- i. Summary table of the groundwater monitoring results collected; and
- ii. Conclusions whether data indicate that natural remediation is no longer appropriate (must then also submit a revised RAWP)

The RAWP for the Industrial #1 Redevelopment Area was limited to soils only. Therefore, this section is not applicable.

11. NJDEP requires a description of all wastes generated as a result of the remedial action

- i. Tabulation of waste characterization samples collected, including the physical state of the material, volume, number of samples, analyses performed and results;
- ii. Listing of types and quantities of waste generated by the remedial action during the reporting period as well as to date;
- iii. Name of the disposal facility used;
- iv. Transporters' dates of disposal; and
- v. Manifest numbers of each waste shipment.

Investigative derived waste (IDW) from the May 2016 groundwater sampling event and well decommissioning activities was generated and waste characterization samples collected. The results of the waste characterization samples of the IDW generated during the May 2016 sampling event and well decommissioning activities are presented in Attachment D. The non-hazardous drums are staged on-site and will be disposed following completion of well decommissioning activities on the Retail Redevelopment Area. Disposal documentation will be provided in the next quarterly progress report.

12. NJDEP requires that any additional support documentation that is available also be provided (photos, etc.).

Photographs showing Building 11 construction activities are in included in Attachment E.

The next scheduled remedial action progress report will include remedial actions completed between June 1 and August 31, 2016. Please feel free to contact me at (614) 793-8777 with any questions regarding the update provided herein.

Sincerely,

Agymmal Genneel

Raymond Kennedy Senior Project Manager

Attachments

ct: David Jennings — Duke Linden, LLC Clifford Ng — U.S. EPA Region 2 Joseph M. Sorge — J.M. Sorge, Inc.

ATTACHMENT A

Report Certification

HULL & ASSOCIATES, INC. DUBLIN, OHIO

Certification

Duke Linden. LLC ISRA Case Number E20040531-Industrial

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statue, I am personally liable for the penalties.

> Duke Linden, LLC, a Delaware limited liability company

By: Duke Realty Limited Partnership, an Indiana limited partnership, its sole member

> By: Duke Realty Corporation, an Indiana corporation, sole general partner

Date: 6/14/14

John Wan Vliet

Vice President, Construction

Sworn to and subscribed to before

me on this 16 m June

COMMONWEALTH OF PENNSYLVANIA NOTARIAL SEAL TAMMY B GLASGOW **Notary Public**

CONSHOHOCKEN BORO, MONTGOMERY COUNTY My Commission Expires Jan 7, 2020

ATTACHMENT B

Fill Material Data Packages

ATTACHMENT C

May 2016 Groundwater Analytical Results

Groundwater Results GM Linden May 2016 Industrial Area



SUMMARY OF ANALYTICAL RESULTS: 460-114359-1 Job Description: GM Linden May 2016 Industrial Area

Former GM Linden Facility 1016 W. Edgar Road Linden, NJ

Client ID	NJ Higher of	DUK059:	EB-1:W052516	DUK059:TB	-1:W052516	DUK059:MW	V-18S:G052516	DUK059:MW	-225:G052516	DUK059:MW-35D	G052516	DUK059:MW-9	20.0052516	
Lab Sample ID	PQLs and GW		460-114359-1	46	60-114359-2			460-114359-4 460-11435				60-114359-6		
Sampling Date	Quality	05/25	/2016 08:15:00	05/25/20	5/25/2016 08:16:00 05/25/2016 09:05:00		05/25/	05/25/2016 09:50:00		11:05:00	05/25/2016 12:50:00			
Matrix	Criterion		Water						Water				- 03/23/2	Water
Dilution Factor	2015		1		1		1		1		11		*******	
Unit	ug/l		υ <u>ρ</u> /i		ug/l		ug/	 	ug/l		ug/l			
VOA-8250C-WATER		Result	Q MDL	Result Q		Result	Q MDL		QI MDL	Result Q	MDL	Result C	ug/I	
	الم المنافعة الماري المراكبة المعالمة المنافعة ا	ALCOVERY CHAPTO V	EX 15-4-4-5-5-6-4-3	transfer to the second of the	gurer ar ar upt du		33 93.43 43.65 33 93.43 43.65	THE PRINT OF THE CONTRACT TO			MUL.			
1,1,1-Trichloroethane	30	0.28	U 0.28	0.28 U		0.28	U 0.28		U 0.28	0.28 U	0.28			
1,1,2,2-Tetrachloroethane	1	0.19	U 0.19	0.19 U		0.19	U 0.19		U 0.19	0.19 U	0.19	0.20	0.28 0.19	
1,1,2-Trichloroethane	3	0.08	U 0.08	0.08 U	0.08	0.08	U 0.08		U 0.08	0.08 U	0.08	0.19 C		
1,1-Dichloroethane	50	0.24	U 0.24	0.24 U	0.24		U 0.24		U 0.24	0.00 U	0.08	2.8	0.08	
1,1-Dichloroethene	1	0.34	U 0.34	0.34 U	0.34	0.34	U 0.34		U 0.34	0.34 U	0.34	1,1	0.24	
1,2,4-Trichlorobenzene	9	0.27	U 0.27	0.27 U	0.27	0.27	U 0.27		U 0.27	0.27 U	0.34	0.27		
1,2-Dibromo-3-Chloropropane	0.02	0.23	U 0.23	0.23 U		0.23	U 0.23		U 0.23	0.23 U	0.27	0.27 C		
1,2-Dibromoethane	0.03	0.19	U 0.19	0.19 U	0.19	0.19	U 0.19		U 0.19	0.19 U	0.19	0.23 0		
1,2-Dichlorobenzene	600	0.22	U 0.22	0.22 Ū	0.22	0.22	U 0.22	0.22	U 0.22	0.22 U	0.15	0.83	J 0.19	
1,2-Dichloroethane	2	0.25	U 0.25	0.25 U	0.25	0.25	U 0.25	0.25	U 0.25	0.25 U	0.25	1.4	0.25	
1,2-Dichloropropane	1	0.18	U 0.18	0.18 U		0.18	U 0.18		U 0.18	0.18 U	0.18	0.18 L		
1,3-Dichlorobenzene	600	0.33	U 0.33	0.33 U	0.33	0.33	U 0.33		U 0.33	0.33 U	0.18	0.33		
1,4-Dichlorobenzene	75	0.33	U 0.33	0.33 U	0.33	0.33	U 0.33		U 0.33	0.33 U	0.33	0.33 (
2-Butanone	300	2.2	U 2.2	2.2 U		2.2	U 2.2		U 2.2	2.2 U	2.2	2.2		
2-Hexanone	300	0.72	U 0.72	0.72 U	0.72	0.72	U 0.72		U 0.72	0.72 U	0.72	0.72 L		
4-Methyl-2-pentanone	NA NA	0.63	U 0.63	0.63 U		0.63	U 0.63		U 0.63	0.63 U	0.63	0.63 L		
Acetone	6000	1.1	U 1.1	1.1 U	1.1	1.1	U 1.1		U 1.1	1.1 U	1.1			
Benzene	1	0.09	U 0.09	0.09 U	0.09	0.09	U 0.09		U 0.09	0.09	0.09	1.1 L 0.78	J 1.1 J 0.09	
Bromodichloromethane	1	0.15	U 0.15	0.15 Ü	0.15	0.15	U 0.15		U 0.15	0.15 U	0.15		0.15	
Bromoform	4	0.18	U 0.18	0.18 U	0.18	0.18	U 0.18		U 0.18	0.18 U	0.18		J 0.15 J 0.18	
Bromomethane	10	0.1B	U 0.18	0.18 U	0.18	0.18	U 0.18		U 0.18	0.18 U	0.18	0.18		
Cerbon disulfide	700	0.22	U 0.22	0.22 U		0.22	U 0.22		U 0.22	0.18 U	0.18	0.18 1		
Carbon tetrachloride	1	0.33	U 0.33	0.33 U		0.33	U 0.33		U 0.33	0.33 U	0.33	0.22		
Chlorobenzene	50	0.24	U 0.24	0.24 U	0.24	0.24	U 0.24		Ü 0.24	0.24 U	0.24	2.2	0.24	
Chloroethane	5	0.37	U 0.37	0.37 U		0.37	U 0.37		U 0.37	0.37 U	0.24	0.37 U		
Chloroform	70	0.22	U 0.22	0.22 U	0.22	0.22	U 0.22		U 0.22	0.22 U	0.22		0.22	
Chloromethane	NA NA	0.22	U 0.22	0.22 U	0.22	0.22	U 0.22		U 0.22	0.22 U	0.22		0.22	
cis-1,2-Dichloroethene	70	0.26	U 0.26	0.26 U	0.26	0.26	U 0.26		U 0.26	0.36 J	0.26	11	0.26	
cis-1,3-Dichloropropene	NA	0.16	U 0.16	0.16 U	0.16	0.16	U 0.16		U 0.16	0.16 U	0.16	0.16 L		
Cyclohexane	NA NA	0.26	U 0.26	0.26 U	0.26	0.26	U 0.26		U 0.26	0.26 U	0.26		U 0.26	
Dibromochloromethane	1	0.22	U 0.22	0.22 U	0.22	0.22	Ü 0.22		U 0.22	0.22 U	0.22		U 0.22	
Dichlorodifluoromethane	1000	0.14	U 0.14	0.14 U	0.14	0.14	U 0.14		U 0.14	0.14 U	0.14		U 0.14	
Ethylbenzene	700	0.3	U 0.3	0.3 U	0.3	0.3	U 0.3		U 0.3	0.3 U	0.3		0.14	
Freon TF	20000	0.34	U 0.34	0.34 U	0.34	0.34	U 0.34		U 0.34	0.34 U	0.34		U 0.34	
Isopropylbenzene	700	0.32	U 0.32	0.32 U	0.32	0.32	U 0.32		U 0.32	0.32 U	0.32		U 0.34	
Methyl acetate	7000	0.58	U 0.58	0.58 U	0.58	0.58	U 0.58		U 0.58	0.58 U	0.58		0.58	
Methylcyclohexane	NA NA	0.22	U 0.22	0.22 U	0.22	0.22	U 0.22		U 0.22	0.22 U	0.22	0.39	J 0.22	
Methylene Chloride	3	1.9	0.21	0.21 U	0.21	0.21	U 0.21		U 0.21	0.21 U	0.21		J 0.22	
MTBE	70	0.13	U 0.13	0.13 U	0.13	0.13	U 0.13		U 0.13	0.17 J	0.13	0.59	J 0.13	
Styrene	100	0.17	U 0.17	0.17 U	0.17	0.17	U 0.17		U 0.17	0.17 U	0.13	0.59 t		
Tetrachloroethene	1	0.12	U 0.12	0.12 U		0.12	U 0.12		U 0.12	0.17 U	0.17	0.17	J 0.17 J 0.12	
Toluene	600	0.25	U 0.25	0.25 U	0.25	0.25	U 0.25		U 0.25	0.12 U	0.12		J 0.12 J 0.25	
trans-1,2-Dichloroethene	100	0.18	U 0.18	0.18 U	0.18	0.18	U 0.16		U 0.18	0.18 U	0.23 0.1B	1.1	0.25	
trans-1,3-Dichloropropene	NA NA	0.19	U 0.19	0.19 U	0.19	0.19	U 0.19		U 0.19	0.18 U	0.18	0.19 L		
Trichloroethene	1.	0.22	U 0.22	0.22 U	0.22	0.22	U 0.22		U 0.22	0.19 U	0.19	13		
Trichlorofluoromethane	2000	0.15	U 0.15	0.15 U	0.15	0.15	U 0.15		U 0.15	0.56 J	0.22		0.22	
Vinyl chloride	1	0.06	U 0.06	0,06 U	0.06	0.06	Ú 0.00		U 0.06	0.15 U	0.15	0.15 L		
Xylenes, Total	1000	0.28	U 0.28	0.28 U	0.28	0.28	U 0.28		U 0.28	0.08 U	0.08	0.28 U	0.06 J 0.28	
Total Conc	NA	1.9			+	0.20	0.20	0.28	0.20	1.09	0.20	37.59	J 0.28	

Highlighted Concentrations shown in bold type face exceed limits

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Groundwater Results GM Linden May 2016 Industrial Area



SUMMARY OF ANALYTICAL RESULTS: 460-114359-1 Job Description: GM Linden May 2016 Industrial Area

Former GM Linden Facility 1016 W. Edgar Road

Lind	6	n,	NJ

Linden, NJ														
Client ID	NJ Higher of	DUK059:MW-921	D:G052516A	DUK059:MW-91	W:G052516	DUK059:MW-	91D:G052516	DUKASOT	3-1:W052716	DUK059:BEC	00.0053746	DUILOCO MAN	000.0050740]	
Lab Sample ID	PQLs and GW	41	60-114359-7	460-114359-8			460-114359-9		160-114553-1		60-114553-2			
Sampling Date	Quality	05/25/20	016 12:50:00		16 10:26:00		2016 11:11:00		016 07:45:00				460-114553-3	
Matrix	Criterion		Water		Water	05/20/	Water	03/2/12	Water	05/2//2	016 08:30:00	05/2//2	2016 09:55:00	
Dilution Factor	2015		1		11		*******		water		Water		Water	
Unit	ug/l		ug/l		ug/l		ug/l		- 1				10	
VOA-8260C-WATER		Result Q		Result Q		Result	Q MDL		ug/l		ug/l		ug/l	
	CONTROL TO THE PROPERTY OF A STATE OF THE PROPERTY OF THE PROP					Result	O PARTIES	Result C		Result (Q MDL	
1,1,1-Trichloroethane	30	0.28 U		0.28 U	0.28		20 2 74 13 1 7	CANNEL CONTRACTOR DIN					力。例如果还是	
1,1,2,2-Tetrachloroethane	1	0.19 U		0.19 U			0.20	0.28 L		0.28 L			U 2.8	
1.1.2-Trichloroethane	3	0.08 U		0.09 J	0.19		U 0.19 U 0.08	0.19 L		0.19 L			U 1.9	
1.1-Dichloroethane	50	2.8	0.24	0.64 J	0.08	0.43	J 0.08		0.08	0.08 L			U 0.8	
1,1-Dichloroethene	1	1	0.34	1.1	0.34		U 0.34		J 0.24 J 0.34	0.33			U 2.4	
1,2,4-Trichlorobenzene	9	0.27 U		0.27 U	0.34		U 0.27			0.34 l			U 3.4	
1,2-Dibromo-3-Chloropropane	0.02	0.23 U		0.23 U			U 0.27			0.27 L			U 2.7	
1,2-Dibromoethane	0.03	0.19 U		0.19 U	0.19		U 0.23		0.23	0.23 U			U 2.3	
1,2-Dichlorobenzene	600	0.71 J		26	0.19		U 0.19	0.19 L 0.22 L		0.19 U			U 1.9	
1,2-Dichloroethane	2	1.5	0.25	19	0.25	1.5	0.25		0.22	0.22 L		3.4	J 2.2	
1,2-Dichloropropane		0.18 Ü		0.18 U						0.25 L			U 2.5	
1,3-Dichlorobenzene	600	0.18 0		0.33 U			U 0.18 U 0.33		0.18	0.18 U			U 1.8	
1,4-Dichlorobenzene	75	0.33 U		0.35 U	0.33			0.33 L	0.00	0.33 l			U 3.3	
2-Butanone	300	2.2 U		2.2 U					0.33	0.33 L			U3.3	
2-Hexanone	300	0.72 U		0.72 U			Ü 2.2	2.2		2.2 (37	J 22	
4-Methyl-2-pentanone	NA NA	0.63 U		0.72 U			U 0.72	0.72 L	J 0.72	0.72 (U 7.2	
Acetone	6000	1.1 U	1.1		0.00		U 0.63	0.63 L		0.63 L		240	6.3	
Benzene	1	0.71 J	0.09	1.1 U			Ú 1.1		기 1.1	1.1		120	11	
Bromodichloromethane		0.71 J		33	0.09	0.099	J 0.09		0.09	0.09 L		160	0.9	
Bromoform		0.15 U	4,10	0.15 U	0.15		U 0.15	0.15 L	0.75	0.15 l		1.5	U 1.5	
Bromomethane	10		01.0	0.18 U	0.18		U 0.18	01.10	J 0.18	0.18	0.18	1.8	U 1.8	
Carbon disulfide	700	0.18 U		0.18 U	0.18		U 0.18	0.18 L	0.18	0.18 L		1.8	U 1.8	
Carbon tetrachloride	700	0.22 U		0.22 U	0.44		U 0.22	0.22 l	J 0.22	0.22 l	0.22	2.2	U 2.2	
Chlorobenzene	50		0.00	0.68 J	0.33	0.00	U 0.33	0.33 L		0.33 l		11	3.3	
Chloroethane	50	2.3	0.24	89	0.24	1.4	0.24	0.24 L	<u> </u>	0.24 t		2.4	U 2.4	
Chloroform	70	0.37 U 0.22 U		0.37 U	0.07		U 0.37		0.37	0.37 J F		3.7	U 3.7	
Chloromethane	NA NA			6.6	0.22		U 0.22		J 0.22	0.22 l	J 0.22	8.3	J 2.2	
cls-1,2-Dichloroethene	70	0.22 U		0.22 U	0.22		U 0.22	,	0.22	0.22	J 0.22	7.3	J 2.2	
cis-1,3-Dichloropropene		12	0.26	61	0.26	4.2	0.26	0.26 L	0.26	0.26	0.26	12	2.6	
Cyclohexane	NA NA	0.16 U		0.16 U	0.16		U 0.16	0.16 L	0.16	0.16	0.16	1.6	Ü 1.6	
Dibromochloromethane	NA NA	0.27 J	0.26	0.26 U	0.26		U 0.26		J 0.26	0.26 l	0.26	96	2.6	
Dichlorodifluoromethane	1	0.22 U		0.22 U	0.22		U 0.22	0.22 L	0.22	0.22 U	0.22	2.2	U 2.2	
Ethylbenzene	1000	0.14 U		0.25 J	0.14		U 0.14	0.14 L		0.14	J 0.14	1.4	U 1.4	
Freon TF	700	0.3 U		0.3 U			U 0.3	0.3 L		0.3	0.3	260	3	
	20000	0.34 U		0.34 U	0.34	0.34	U 0.34		J 0.34	0.34 l		3.4	U 3.4	
Isopropylbenzene Methyl acetate	700	0.32 U		0.32 U	0.02		U 0.32		0.32	0.32	0.32	16	3.2	
	7000	0.58 U		0.58 U	0.00		U 0.5B	0.58 L	0.58	0.58	0.58	5.8	U 5.8	
Methylcyclohexane Methylene Chloride	NA	0.22 U		0.22 U	0.22		U 0.22	0.22 L	0.22	0.22	J 0.22	46	2.2	
MTBE	3	0.21 U		1,5	0.21	0.21	U) 0.21	0.62	J 0.21	0.21 l	J 0.21	5.8	J 2.1	
	70	0.6 J	0.13	0.67 J	0.13	0.47	J 0.13	0.13	0.13	0.13	0.13		U 1.3	
Styrene	100	0.17 U		0.17 U	****	****	U 0.17	0.17 L	J 0.17	0.17			U 1.7	
Tetrachloroethene	_ 1	0.5 J	0.12	2.7	0.12	1.6	0.12	0.12	0.12	0.12			U 1.2	
Toluene	600	0.26 J	0.25	0.25 L	0.25	0.25	U 0.25	0.25 L	0.25	0.25		1600	2.5	
trans-1,2-Dichloroethene	100	1.1	0.18	4.8	0.18	0.73	J 0.18	0.18	0.18	0.18		5	J 1.8	
trans-1,3-Dichloropropene	NA NA	0.19 U		0.19 L	0.19	0.19	U 0.19	0.19 L	0.19	0.19			U 1.9	
Trichloroethene	1	13	0.22	51	0.22	16	0.22		0.22	0.22		48	2.2	
Trichlorofluoromethane	2000	0.15 U	0.10	0.15 U	0.15	0.15	U 0.15		0.15		0.15	1.5	U 1.5	
Vinyl chloride	1	2.1	0.06	19	0.06	0.25	J 0.06	0.06 L	0.06	0.06		91	J 0.6	
Xylenes, Total	1000	0.28 U	0.28	0.2B L	0.28	0.28	U 0.28		0.28	0.28		1200	2.8	
Total Conc	NA NA	38.85		317.78	 	26.679	3,20	0.62	5.20	0.33	9.20	3884.8	- 2.0	
								0.02	1 1	0.00	1 1	3004.6	1 .	

Highlighted Concentrations shown in bold type face exceed limits

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Groundwater Results GM Linden May 2016 Industrial Area



SUMMARY OF ANALYTICAL RESULTS: 460-114359-1 Job Description: GM Linden May 2016 Industrial Area

Former GM Linden Facility 1016 W. Edgar Road

Linden, NJ

Client ID														
Lab Sample ID	NJ Higher of			DUK059:M			DUK059:MV			DUK059:M\	V-93D	:G052716		
	PQLs and GW		460-114553-4		460-114553-5									
Sampling Date Matrix	Quality	05/27/2	016 10:40:00	05/2	05/27/2016 08:26:00			7/2016 0	9:41:00					
	Criterion		Water		Water		Wate			Wate				
Dilution Factor	2015		1									1		
Unit	ug/		ug/l	ug/i			·			ug/l				
VOA-8260C-WATER			MDL.	Result	a	MDL	Result	Q	MDL	Result	Q	MDL		
WATER BY 8260C						のでださる	CRAMMERS TO THE	या प्राप्त	(स्वक्टर)	ו וויים יכ יינים אינים אינים וועדען	/~~J	177571.55C		
1,1,1-Trichloroethane	30		J 0.28	0.28	U	0.28	1.4	U	1.4	0.28	Ú	0.28		
1,1,2,2-Tetrachloroethane	1		J 0.19		Ü	0.19	0.95	U	0.95	0.19	U	0.19		
1,1,2-Trichloroethane	3		J 0.08	0.08	U	0.08	0.4	ul	0.4	0.08	U	0.08		
1,1-Dichloroethane	50		J 0.24	0.4	J	0.24	1.2	U	1.2	0.4	J	0.24		
1,1-Dichloroethene	1		0.34	0.34	U	0.34	1.7	U	1.7	0.34	U.	0.34		
1,2,4-Trichlorobenzene	9		J 0.27	0.27	U	0.27	1.4	U	1.4	0.27	Ü	0.27		
1,2-Dibromo-3-Chloropropane	0.02		0.23	0.23	U	0.23	1.2	u	1.2	0.23	~ul-	0.23		
1,2-Dibromoethane	0.03		J 0.19		Ü	0.19	0.95	_U	0.95	0.19	Ü	0.19		
1,2-Dichlorosthane	600		0.22		U	0.22	2.7	J	1.1	4.3	$\neg \vdash$	0.22		
	2		J 0.25	0.25	U	0.25	1.3	U	1.3	0.25	U	0.25		
1,2-Dichloropropane		0.10	0.18		U	0.18	0.9	U	0.9	0.18	U	0.18		
1,3-Dichlorobenzene	600		0.33 ل	0.33	U	0.33	1.7	U	1.7	0.33	u	0.33		
			J 0.33	0.33	U	0.33	1.7	Ü	1.7	0.33	U	0.33		
2-Butanone	300		J 2.2	2.2	Ū	2.2	62		11	2.2	Ū	2.2		
2-Hexanone	300		J 0.72	0.72	U	0.72	8	J	3.6	0.72	Ū	0.72		
4-Methyl-2-pentanone	NA NA		J 0.63	0.63	U	0.63	430		3.2	0.63	Ū	0.63		
Acetone	6000		1.1	11		1.1	160		5.4	1.1	Ü	1.1		
Benzene		2.7	0.09	0.09	U	0.09	210		0.45	98		0.09		
Bromodichloromethane	1		J 0.15		U	0.15	0.75	U	0.75	0.15	u	0.15		
Bromoform	4		J 0.18	0.18	U	0.18	0.9	U	0.9	0.18	Ū	0.18		
Bromomethane	10		J 0.18		U	0.18	0.9	U	0.9	0.18	Ū	0.18		
Carbon disulfide	700		J 0.22	0.22	Ų	0.22	1.1	u	1.1	0.22	ŭ	0.22		
Carbon tetrachloride	1		J 0.33	0.33	U	0.33	1.7	ul	1.7	0.33	ū	0.33		
Chlorobenzene	50		J 0.24	0.24	_ U	0.24	1.7	J	1.2	2		0.24		
Chloroethane	5		J 0.37	0.37	Ū	0.37	1.9	U	1.9	0.37	U	0.37		
Chloroform	70		J 0.22	0.22	U	0.22	1.1	U	1.1	0.22	ū	0.22		
Chloromethane	NA NA		J 0.22	0.22	Ü	0.22	1.1	U	1.1	0.22	ū	0.22		
cis-1,2-Dichloroethene	70		J 0.26	0.26	U	0.26	19	1	1.3	0.26	Ü	0.26		
cis-1,3-Dichloropropene	NA NA	0.16	0.16	0.16	U	0.16	0.8	U	0.8	0.16	Ū	0.16		
Cyclohexane	NA NA	7.7	0.26	0.26	Ü	0.26	130	_	1.3	43	-	0.26		
Dibromochloromethane		0.22	J 0.22	0.22	U	0.22	1.1	u	1,1	0.22	υl	0.22		
Dichlorodifluoromethane	1000	0.14	J 0.14	0.14	U	0.14	0.7	Ū	0.7	0.14	히	0.14		
Ethylbenzene	700	47	0.3	0.3	ü	0.3	380	\neg	1.5	84		0.3		
Freen TF	20000		0.34	0.34	U	0.34	1.7	u	1.7	0.34	ul	0.34		
Isopropylbenzene	700	4.5	0.32	0.32	U	0.32	26	_	1.6	24		0.32		
Methyl acetate	7000	0.58	J 0.58	0.58	u	0.58	2.9	υ	2.9	0.58	Ul-	0.58		
Methylcyclohexane	NA NA	1	0.22	0.22	Ū	0.22	30		1.1	7.3	~~	0.22		
Methylene Chloride	3	0.51	J 0.21	1.3	\neg	0.21	3.2	J	1.1	- 7.0	\dashv	0.21		
MTBE	70	0.13	J 0.13	0.92	J	0.13	0.65	Ū	0.65	0.77		0.13		
Styrene	100	0.17	J 0.17	0.17	U	0.17	0.85	Ū	0.85	0.17	Ü	0.17		
Tetrachloroethene		0.12	J 0.12	0.12	··U	0.12	0.6	U	0.6	0.12	ū	0.12		
Toluene	600		J 0.25	0.25	Ū	0.25	980		1,3	1.5	-	0.12		
trans-1,2-Dichloroethene	100	0.18	U 0.18		Ū	0.18	21	-	0.9	3.6	-+	0.18		
trans-1,3-Dichloropropene	NA NA	0.19	0.19		Ü	0.19	0.95	- U	0.95	0.19	ᆔ	0.19		
Trichloroethene	1	0.22	0.22	0.22	Ü	0.22	25	- -	1.1	0.19	레-	0.19		
Trichlorofluoromethane	2000		0.15		Ü	0.15	0.75	ᆔᅳ	0.75	0.22	비	0.22		
Vlnyl chloride	1		0.06	0.06	Ü	0.06	4.7	<u> </u>	0.73	4.3		0.15		
Xylenes, Total	1000		J 0.28	0.28	Ü	0.28	1900		1.4	4.6	+	0.08		
Total Conc	. NA	83.83	1 3.20	13.62		5.20	4393.3	$\neg +$	1.4	278.77	+	0.28		
				10.02			+333.3			2/8.//	L			

Highlighted Concentrations shown in bold type face exceed limits

 $^{{\}bf J}$: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

ATTACHMENT D

Waste Characterization Results

Waste Characterization Results May 2016 Purge Water May 2016 Well Decommissioning



SUMMARY OF ANALYTICAL RESULTS: 460-114552-1 Job Doscription: Duke Linden NJ May 2016 Retail Area For: Former GM Linden Site 1016 W. Edgar Road Linden, NJ

Client ID	NJ Higher of	N1:W052716	DUK059:WC-DRUMS:W052716								
Lab Sample ID	PQLs and GW			60-114552-1		4	60-114552-2				
Sampling Date	Quality		27/20	016 11:05:00	05/	05/27/2016 11:					
Matrix	Criterion			Water			Wate				
Dilution Factor	2015			1			1				
Unit	ug/l			ug/l		ug/					
VOA-8260C-WATER		Result	1 0		Result						
WATER BY 8260C	POSTAR PROPERTY CONTRACTOR	SANCKA TOLICA			CONTRACTOR 3		LOSTEZ LAT				
1,1,1-Trichloroethane	30	0.28			0.28	U	0.28				
1,1,2,2-Tetrachloroethane	1	0.19				Ū					
1.1.2-Trichloroethane	3	0.08			0.25	Ĵ					
1.1-Dichloroethane	50	0.24			0.24	υ					
1.1-Dichloroethene	1	0.34			0.51	J					
1.2.4-Trichlorobenzene	9	0.27			0.27	Ť					
1,2-Dibromo-3-Chloropropane	0.02	0.23	Ιŭ		0.23	ū					
1.2-Dibromoethane	0.03	0.19			0.19	ŭ					
1,2-Dichlorobenzene	600	0.78			0.22	Ť					
1,2-Dichloroethane	2	0.35	ij		24		0.25				
1,2-Dichloropropane	1	0.33			0.18	U					
1.3-Dichlorobenzene	600	0.33	tü		0.10	Ü					
1.4-Dichlorobenzene	75	0.33			0.33	ŭ					
2-Butanone	300	4.8	ij		2.2	Ü	2.2				
2-Hexanone	300	0.72	ŭ		0.72	ŭ	0.72				
4-Methyl-2-pentanone	NA NA	20	۱	0.63	0.63	ū	0.63				
Acetone	6000	22	_	1.1	23	<u> </u>	1.1				
Benzene	1	13		0.09	4.8		0.09				
Bromodichloromethane	1	0.15	lυ	0.15	0.15	ū	0.15				
Bromoform	4	0.18		0.18	0.18	11.	0.18				
Bromomethane	10	0.18	ŭ	0.18	0.18	Ŭ	0.18				
Carbon disulfide	700	0.10	ŭ	0.10	0.22	−ŏ	0.10				
Carbon tetrachloride	1	0.33	ŭ	0.33	0.33	ŭ	0.33				
Chlorobenzene	50	0.39	ij	0.24	5.7	<u> </u>	0.24				
Chloroethane	5	0.37	ŭ	0.37	0.37	Û	0.37				
Chloroform	70	0.22	Ü	0.22	0.71	J	0.22				
Chloromethane	NA NA	0.22	Ŭ	0.22	0.22	Ū	0.22				
cis-1,2-Dichloroethene	70	1.3	Ť	0.26	220		0.26				
cis-1,3-Dichloropropene	NA NA	0.16	U	0.16	0.16	U	0.16				
Cyclohexane	NA NA	6.5	Ť	0.26	0.26	Ū	0.26				
Dibromochloromethane	1	0.22	Ü	0.22	0.22	ŭ	0.22				
Dichlorodifluoromethane	1000	0.14	Ű	0.14	0.14	ŭ	0.14				
Ethylbenzene	700	20	_	0.3	0.3	Ü	0.3				
Freon TF	20000	0.34	U	0.34	0.34	Ū	0.34				
Isopropylbenzene	700	1.8		0.32	0.32	Ū	0.32				
Methyl acetate	7000	0.58	u	0.58	0.58	ŭ	0.58				
Methylcyclohexane	NA NA	1.9		0.22	0.22	Ū	0.22				
Methylene Chloride	3	0.4	J	0.21	0.21	ŭ	0.21				
MTBE	70	0.13	ŭ	0.13	0.2	J	0.13				
Styrene	100	0.17	ŭ	0.17	0.17	ŭ	0.17				
Tetrachloroethene	1	1.3	-1	0.12	0.34	J	0.12				
Toluene	600	77	\neg	0.25	0.38	Ť	0.25				
trans-1,2-Dichloroethene	100	0.92	J	0.18	5.5		0.18				
trans-1.3-Dichloropropene	NA NA	0.19	Ü	0.19	0.19	U	0.19				
Trichloroethene	1	2.4		0.22	14		0.22				
Trichlorofluoromethane	2000	0.15	U	0.15	0.15	U	0.15				
Vinyl chloride	1	0.54	-ji	0.06	1,1	-1	0.06				
Xylenes, Total	1000	90	1	0.28	0.28	u l	0.28				
Total Conc	NA.	265.38	$\neg \dagger$		300.49	_					

Highlighted Concentrations shown in bold type face exceed limits
*:LCS or LCSD is outside acceptance limits.

J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U: Indicates the analyte was analyzed for but not detected.

ATTACHMENT E

Site Photographs





















